REMARKS

Reconsideration is respectfully requested.

Claims 1 through 31 remain in this application. Claims 8, 12 through 18, 21, 22, 25 through 28 and 31 have been cancelled without prejudice. No claims have been withdrawn. No claims have been added in this Response.

Claims 1 through 20 and 24 through 31 have been rejected under 35 U.S.C. §102(e) as being anticipated by Petrushin (6,275,806). (Although claims 21 through 23 were not specifically mentioned in paragraph 4 of the rejection set forth in paragraph 4 of the Detailed Action, claims 21 through 23 were specifically mentioned in paragraph 16 of the Detailed Action as being rejected over Petrushin.)

Claims 8, 12 through 18, 21, 22, 25 through 28 and 31 have been cancelled without prejudice.

Submitted with this Response is a "Declaration under 37 CFR §1.131" of the applicant, Glen John Anderson, and an Exhibit "A" which is an invention disclosure form completed prior to the filing date of August 31, 1999 of the Petrushin patent forming the basis of the rejection of claims 1 through 7, 9 through 11, 19, 20, 23, 24, 29, and 30.

It is therefore submitted that, in view of the "Declaration under 37 CFR §1.131" and the Exhibit "A", that the Petrushin patent is not prior art to the invention as defined in claims 1 through 7, 9 through 11, 19, 20, 23, 24, 29, and 30, as these documents show that the present invention was conceived prior to the filing date of the Petrushin patent.

Withdrawal of the §102(e) rejection of claims 1 through 7, 9 through 11, 19, 20, 23, 24, 29, and 30 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

KAARDAL & LEONARD, L.L.P.

By _____ **Date:** 10/8/03

Ivar M. Kaardal (Reg. No. 29,812)
KAARDAL & LEONARD, L.L.P.
3500 South First Avenue Circle, Suite 250
Sioux Falls, SD 57105-5802
(605)336-9446 FAX (605)336-1931
e-mail patent@kaardal.com

Gateway

Invention DISCLOSURE FORM

EXHIBIT A

GATEWAY NUMBER: [redacted]-1206 Design (Utility) DATE RECEIVED: [redacted]

Do Not Write Above

Use Tab Key to Navigate the Fields
Completely Answer Each Field

The Information You Put In Box 1, 2, and 3 Is the Only Explanation Of Your Invention That The Patent Review Board Will Read. Make It Clear And Concise So That The PRB Can Easily Determine The Value Of Your Invention.

Title Of Invention: **Mood-Sensing Input System**

1. Describe Invention In Detail And How To Build Or Implement It:

As email and Internet chat rooms become more ubiquitous, people communicate more through typewritten text than ever before. Video technologies have begun to be more common place for communications, but because of the speed, bandwidth, familiarity, and anonymity that type-written text provides, it will continue to be an important method of communication over computer networks.

One limitation of typewritten text is the difficulty in expressing emotion with the verbal content. Several techniques are currently used that allow some expression. For example:
- Use of standard characters, meant to be viewed sideways, e.g., ;) -(semi-colon and close-parenthesis to make a sideways winking smile) to show that the writer is making a joke,
- special inserted characters, such as small smiling faces to show the writer is happy,
- use of color to express a mood, and
- all caps to show loudness or to convey frustration.

However, these techniques are limited and inconvenient to use. The user must stop the writing task to retrieve formatting commands, removing spontaneity from writing. Some users take time to set up shortcuts or macros to make the task easier, but this takes time and specialized knowledge, and the users are still limited to a few techniques.

This disclosure proposes a text-input system that automatically senses the mood of the writer (while typing takes place) and adds special formatting in the displayed text to convey the writer's mood. Some possible methods and apparatus for interpreting emotion are as follows:
1) Force of key strikes on keyboards could be sensed. Hard strikes could connote loudness, anger, or frustration. Special characters that show mood (e.g., face with a frown) could be inserted automatically.
2) A video camera, recording the writer, and supporting software could interpret the writer's facial expressions. This information could be used to interpret ambiguous input, such as hard key strikes.
3) Other physical cues, such as pupil dilation could also be measured through analysis of video. Pupil dilation correlates with degree of interest.
4) Analysis of video could also be used to input special characters, such as smiling faces.
5) Keys could have surfaces similar to capacitive touchpads, which could sense the degree of conductivity of a writer's fingers. Degree of skin conductance is correlated with emotion.
6) Facial expressions and gestures could be used along with standard inputs. For example, the writer could select a string of text, then make an expression to indicate how it should be formatted.
7) Some Chat rooms allow text formatting commands to make text appear a certain way to readers (see Appendix A for an example). The keyboard and supporting software in the proposed invention could automatically add tags (for standard tag systems) to allow formatting to appear in such situations. For example, formatting text in a certain color would cause tags to be added when the note is uploaded to a chat room.

8) When files or any content is saved by the user, the proposed invention could label the stored content with an satisfaction rating from the user. This could happen automatically. In the case of a file, it could be labelled with a rating number between 1 and 10, for example, or with an emotive label, such as a happy, sad, or laughing face.

This disclosure could be generalized beyond keyboards to cover other non-visual inputs, such as mouse clicks. For example, a hard mouse click could connote anger or enthusiasm, to which the system could respond (see Graphic 1). The difference could be determined through analysis of video showing the writer's expression.

The following are advantages of such a system:
- The convenience of not having to retrieve formatting commands would free up the writing process.
- Over time, standards could grow around such a system. For example a hard mouse click on a dialog box could show the user's frustration to the computing system. Based on this information the system could offer to remove such dialog boxes from the user interface. People who communicate in online chat sessions could evolve a richer set of emotional cues.
- Some method of sensing mood, such as galvanic skin response, may not be truly good indicators or mood. However, for entertainment purposes, such features could be valuable.
- Methods of sensing emotion, such as force of key strikes, that could lead to ambiguous analysis, could be strengthened by use of a secondary method, such as analysis of video input of the writer's expression.

Implementation

Pressure sensitive keyboards have already been patented. Such keyboards could be used to sense the force of keyboard strikes.

Video systems with supporting software have already been proposed for sensing the emotions of computer users. Such video analysis systems could be used for the mood keyboard system.

Keyboard keys could have touchpad-like surfaces that sense skin conductivity and force of key strikes.

Supporting software built into the keyboard driver could receive each key strike and format the text based upon analyzed input from the video camera, key strike force sensors, and other devices.

Existing HTML transformation tools could be intergated into the system.

2. What Is The Closest Technology Of Which You Are Aware:

Products have already been proposed that interpret gestures and facial expressions. Existing software products, such as Microsoft Word, allow documents to be saved as HTML files.

3. How Is Your Invention Different From Present Technology:

1. The proposed invention would interactively pair emotional interpretation with keyboard and mouse inputs.

2. The proposed invention would use various methods to interpret the emotions of the PC user, then use this information to automatically format text.

3. Depending upon the mood that is sensed, special characters can be inserted automatically.

4. Inputs to the computer system, which could be interpreted as frustration or difficulty with the computer, could initiate responses from the system to help the user.

5. Aside from any mode sensing ability, data indicating the force at which a key was actuated could be used to format text. For example, striking a key hard could make that letter a capital.

6. The proposed system could add formatting tags automatically for standard chat formatting systems and for HTML, without requiring a SaveAs task.

7. Aside from any mood sensing ability, a system that automatically adds HTML or chat room formatting tags may be novel. The user could simply upload automatically formatted HTML pages without requiring a SaveAs task.

8. When content is saved, the proposed system could be used to label the content with a satisfaction or emotive label.

Gateway

Invention DISCLOSURE FORM

4. When was this invention first conceived: [redacted] & [redacted]

5. When was this invention first documented: [redacted] & [redacted]

6. Are there any written records such as laboratory notes, e-mail, meeting notes, or etc in which this invention is described and where can they be found:
Yes, in the inventor's lab notebook.

7. If you or your co-inventors have described this invention in whole or in part in manuscripts, reports, oral presentations, sales pitches, advertisements, posters, or others describe and state who/when/where:
Yes, discusses the idea with Steven Vossler on [redacted].

8. If this invention is planned for public use, offer for sale, or part of Gateway's product state when/where:

9. List any witnesses who can corroborate the development of this invention Give names, dates, addresses, and phone numbers:

Attach all Drawings, Flow Charts, Schematics, E-mail, and other documentation to this form.

Definition Of A Witness: A person who understands and acknowledges the invention as put forth in this disclosure

Signature Of Two Persons Witnessing And Understanding This Disclosure

Signature [redacted] Date

INFORMATION DEVELOPER
Title

Signature 1/1 Date

[redacted]
Title

Invention DISCLOSURE FORM

Primary Inventor (Originator of Idea)

Full Legal Name (Last, First, M.I.): **Anderson, Glen J.** Date Signed: [redacted]

SIGNATURE: Glen Anderson

Full Legal Address: Street: 3034 Pierce St.City:Sioux City State:IA Zip: 51104
Country of Citizenship: USA Pay Grade 39 or Above (Yes/No): No
Work Phone & Extension: 605-232-1644 Home Phone: 712-252-5837 Social Security #: [redacted]
Your Supervisor: John Love Your Primary Area(Pick One): [Customer Experience Or: Choose]

Inventor #2

Full Legal Name (Last, First, M.I.): Date Signed: ___/___/___

SIGNATURE: _____

Full Legal Address: Street: City. State: Zip:
Country of Citizenship: Pay Grade 39 or Above (Yes/No): ?
Work Phone & Extension: Home Phone: Social Security #:
Your Supervisor: Your Primary Area(Pick One): [Choose Or: Choose]

Inventor #3

Full Legal Name (Last, First, M.I.): Date Signed: ___/___/___

SIGNATURE: _____

Full Legal Address: Street: City: State: Zip.
Country of Citizenship: Pay Grade 39 or Above (Yes/No): ?
Work Phone & Extension: Home Phone: Social Security #:
Your Supervisor: Your Primary Area(Pick One): [Choose Or: Choose]

Inventor #4

Full Legal Name (Last, First, M.I.): Date Signed: ___/___/___

SIGNATURE: _____

Full Legal Address: Street: City: State: Zip:
Country of Citizenship: Pay Grade 39 or Above (Yes/No): ?
Work Phone & Extension: Home Phone: Social Security #
Your Supervisor. Your Primary Area(Pick One): [Choose Or: Choose]

Inventor #5

Full Legal Name (Last, First, M.I.): Date Signed: ___/___/___

SIGNATURE: _____

Full Legal Address: Street: City: State: Zip:
Country of Citizenship: Pay Grade 39 or Above (Yes/No): ?
Work Phone & Extension: Home Phone: Social Security #.
Your Supervisor: Your Primary Area(Pick One): [Choose Or: Choose]

Inventor #6

Full Legal Name (Last, First, M.I.): Date Signed: ___/___/___

SIGNATURE: _____

Full Legal Address: Street: City: State: Zip:
Country of Citizenship: Pay Grade 39 or Above (Yes/No): ?
Work Phone & Extension: Home Phone: Social Security #:
Your Supervisor: Your Primary Area(Pick One): [Choose Or: Choose]